

What is claimed is:

1. A noise controller for actively controlling noise, the controller comprising:

a sensor part perceiving a noise and outputting a noise signal corresponding to said noise;

a phase perceiving part perceiving a phase of said noise signal and outputting a phase signal; and

a micro computer part generating a noise control signal based a residual noise signal and an error variation signal.

2. The noise controller of claim 1, further comprising:

a signal amplifying part amplifying said noise signal from said sensor part;

a first low pass filter filtering said amplified noise signal from said signal amplifying part and outputting a filtered noise signal to said phase perceiving part and said micro computer part;

a second low pass filter filtering said noise control signal from said micro computer part;

an electric power amplifying part amplifying a filtered noise control signal from said second low pass filter; and

an output part outputting an amplified filtered noise control signal from said electric power amplifying part.

3. The noise controller of claim 1, wherein said micro computer includes an index table.

4. The noise controller of claim 1, wherein said micro computer includes a neural net.

5. The noise controller of claim 1, wherein said micro computer includes a control rule controlling part (CRCP) generating said noise control signal to minimize said residual noise signal.

6. The noise controller of claim 1, wherein said micro computer includes a mixer mixing said noise signal and said noise control signal for generating said residual noise signal and said error variation signal.

7. The noise controller of claim 1, wherein said phase perceiving part includes:

a transformer transforming said noise signal;

a full-wave rectifier rectifying a transformed noise signal from said transformer;

a pressure sensitive circuit converting a fully rectified signal from said full-wave rectifier; and

a bandpass filter bandpass filtering a converted signal from said pressure sensitive circuit.

8. The noise controller of claim 1, wherein a frequency of said noise signal is a multiple of a base frequency.

9. The noise controller of claim 8, wherein said micro computer part processes said noise signal without delay in phase from said noise signal.

10. A method of actively controlling noise, the method comprising:  
perceiving a noise and generating a noise signal;  
perceiving a phase of said noise signal and generating a phase signal;  
and  
generating a noise control signal based a residual noise signal and an error variation signal.

11. The method of claim 10, further comprising:

amplifying said noise signal;

low pass filtering said amplified noise signal;

low pass filtering said noise control signal;

power amplifying said filtered noise control signal; and

outputting said power amplified filtered noise control signal.

12. The method of claim 10, wherein said noise control signal is generated through the use of a look up table based on values said residual noise signal and said error variation signal.

13. The method of claim 10, wherein said residual noise signal and said error variation signal are generated through the use of a neural net.

14. The method of claim 10, wherein said noise control signal is generated to minimize said residual noise signal.

15. The method of claim 10, wherein said noise signal and said noise cancellation signal are mixed for generating said residual noise signal and said error variation signal.

16. The method of claim 10, wherein said phase perceiving step comprises:

transforming said noise signal;  
full-wave rectifying said transformed noise signal;  
converting said fully rectified signal; and  
bandpass filtering said converted signal.

17. The method of claim 10, wherein a frequency of said noise signal is a multiple of a base frequency.

18. The method of claim 17, wherein said noise signal is processed without delay in phase from said noise signal.